UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,028	03/31/2004	Hai-Cha Lo	BHT-3111-450	3873

7590   10/04/2007

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ART UNIT	PAPER NUMBER
2193	

MAIL DATE	DELIVERY MODE
10/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/813,028	LO ET AL.
	Examiner	Art Unit	
	Insun Kang	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 July 2004 and 03 March 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-23</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-23</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>03 March 2004</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1. This action is responding to application papers dated on 7/28/2004 and 3/3/2004.

2. Claims 1-23 are pending in the application.

Drawings

3.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 33 in page 6. 32 and 33 in page 7. In page 7, figure 4 in line 9 appears to be corrected to figure 5. 20d in page 9 is not shown in drawings. In page 9, 10d in line 32 appears to be corrected to 10c. 20d and 10d in page 10 need to be corrected.

4.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 144 in Fig. 8.

5.   Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6.   The disclosure is objected to because of the following informalities: "lucked status" in

the specification (page 5, line 27, page 10, line 11) appears a minor typographical error that

needs to be corrected to "locked status." Appropriate correction is required.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
patent by another filed in the United States before the invention by the applicant for patent, except that an
international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
subsection of an application filed in the United States only if the international application designated the United
States and was published under Article 21(2) of such treaty in the English language.

8.   Claims 1-8, 10-15, and 17-22 are rejected under 35 U.S.C. 102(e) as being anticipated by

Chang et al. (US Pub. No. 2003/0088868) hereafter Chang.

Per claim 1:

Chang discloses:

- A method for upgrading an execution code of a portable memory device,

  wherein said execution code is stored in a programmable non-volatile memory

  unit of said portable memory device (i.e. page 2, 0032, "updating or upgrading

  firmware on a flash memory card")

- providing a host computer, said host computer having a first execution code and

  a driver upgrading mechanism (i.e. page 1, 0010)

-        establishing a communicating link between said host computer and said portable

        memory device (i.e. card reader, page 1, 0008, page 3, 0041);

-        (c) checking a upgrading signal, and restoring said first execution code of said

        host computer to said programmable non-volatile memory unit of said portable

        memory device according to said upgrading signal (i.e. page 3, 0044; page 4,

        0046);

-        and (d) starting said portable memory device according to said upgraded

        execution code of said portable memory device (i.e. page 1, 0009; page 4,

        0048).

Per claim 2:

Chang further discloses:

-        connecting said portable memory device and a connecting device, wherein said

        connecting device transfers data between said portable memory device and said

        host computer by a predetermined protocol (i.e. page 1, 0008)

-        providing a power source to said portable memory device from said host

        computer (i.e. page 5, 0057).

Per claim 3:

Chang further discloses:

-        reading a version of said execution code of said portable memory device by

        said host computer, and comparing said version of said execution code of said

portable memory device with a version of said first execution code of said host

computer (i.e. page 4, 0048)

- outputting said upgrading signal from said host computer when said version of

said first execution code of said host computer is newer than said version of said

execution code of said portable memory device (i.e. page 9, 0102).

Per claim 4:

Chang further discloses:

- the execution code overwrite module in the external host device writes the new

version execution code stored in the external host device into portable memory

device and verify the transferred execution code (i.e. page 1, 0011; page 4,

0046)

- deleting said execution code stored in said programmable non-volatile memory

unit of said portable memory device (i.e. page 4, 0047; page 7, 0077)

- and (d3) writing said first execution code of said host computer in said

programmable non-volatile memory unit of said portable memory device (i.e.

page 1, 0011, page 4, 0048).

Per claim 5:

Chang further discloses:

- wherein said portable memory device is a solid state disk (i.e. a flash memory,

page 1, 0010).

Per claim 6:

Chang further discloses:

- wherein said host computer links to a remote server through a network and downloads a new version of said execution code and a file contained said execution code upgrading mechanism over said network (i.e. page 4, 0044).

Per claim 7:

Chang further discloses:

- a memory device for storing at least one said execution code and said execution code upgrading mechanism of said host computer, wherein said execution code upgrading mechanism comprises a execution code version comparing module, a upgrading signal generating module and execution code writing module (i.e. page 4, 0045, 0048);

- and a transfer interface for establishing said communicating link with said portable memory device and transferring data by said predetermined protocol (i.e. page 3, 0037),

- and a control unit, coupled to said memory device and said transfer interface, for controlling said memory device and said transfer interface, being able to be driven by said execution code upgrading mechanism, and upgrading said execution code of portable memory device (i.e. page 3, 0040, 0041, 0037).

Per claim 8:

Chang further discloses:

- wherein said portable memory device further comprises a control chip, wherein said programmable non-volatile memory unit builds in said control chip (i.e. page 2, 0034).

Per claim 10:

Chang further discloses:

- wherein said programmable non-volatile memory unit is an independent memory chip (i.e. a flash memory card, page 1, 0010).

Per claim 11:

Chang further discloses:

- wherein said portable memory device comprises a programmable memory array for storing external data, said programmable non-volatile memory unit is a portion of said programmable memory array (i.e. a flash memory card, page 1, 0008).

Per claim 12:

Chang discloses:

- upgrading a execution code of a portable memory device, wherein said execution code is stored in a programmable non-volatile memory unit of said portable memory device (i.e. page 2, 0032, "updating or upgrading firmware on a flash memory card")

- a connection device coupling to said portable memory device (i.e. page 3, 0037);

- a host computer 9i.e. page 1, 0008)

- a memory device for storing at least one said execution code and said execution code upgrading mechanism of said host computer, wherein said execution code upgrading mechanism comprises a execution code version comparing module (i.e. page 2, 0033)

- a upgrading signal generating module and a execution code writing module, wherein said execution code version comparing module compares a version of said execution code of said portable memory device with a version of a first execution code of said host computer and produces a result of comparison (i.e. page 4, 0044),

- wherein said upgrading signal generating module generates a upgrading signal according to said result of comparison (i.e. page 3, 0044)

- , wherein said execution code writing module initializes a procedure for writing said first execution code of said host computer into said programmable non-volatile memory unit of said portable memory device (i.e. page 9, 0102, page 4, 0048);

- a transfer interface for establishing said communicating link with said portable memory device and transferring data by a predetermined protocol (i.e. page 3, 0037),

- and a control unit, coupled to said memory device and said transfer interface, for controlling said memory device and said transfer interface, being able to be

driven by said execution code upgrading mechanism, and upgrading said

execution code of portable memory device (i.e. page 3, 0040,0041, 0037).

- (i.e. page 2, 0032, "updating or upgrading firmware on a flash memory card").

Per claims 13-15 and 17-18, they are the apparatus versions of claims 5, 6, 8, 10, and 11,

respectively, and are rejected for the same reasons set forth in connection with the rejection of

claims 5, 6, 8, 10, and 11 above.

Per claim 19:

Chang further discloses:

- wherein portable memory device is a memory card and said connection device is

  a memory card reader (i.e. flash memory reader, page 1, 0010).

Per claim 20:

Chang further discloses:

- wherein said connection device builds in said host computer (i.e. page 1. 0010).

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

9.   Claims 9, 16, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Chang et al. (US Pub. No. 2003/0088868) hereafter Chang in view of Grover et al. (US Patent

6,282,700) hereafter Grover.

Per claim 9:

Chang does not explicitly teach that said portable memory device stores a plurality of

execution codes which are in different versions. However, Grover teaches maintaining multiple

versions of an object in flash memory was known in the pertinent art, at the time applicant's

invention was made, to "allow multiple revisions of an object to be stored" in flash memory (i.e.

col. 2 lines 57-67). It would have been obvious for one having ordinary skill in the art to modify

Chang's disclosed system to incorporate the teachings of Grover. The modification would be

obvious because one having ordinary skill in the art would be motivated to maintain prior

versions of the firmware "to eliminate the problems associated with storing a single version (i.e.

col. 2 lines 60-65)" of the firmware as suggested by Grover.

Grover further discloses:

-        said step of said checking said upgrading signal comprises: (cc1) reading a

         newest version of said execution codes of said portable memory device by said

         host computer (i.e. col. 3 lines 50-58)

-        and comparing said newest version of said execution code of said portable

         memory device with a version of said first execution code of said host computer

         (i.e. col. 4 lines 17-35)

-        outputting said upgrading signal from said host computer when said version of

said first execution code of said host computer is newer than said newest version

of said execution code of said portable memory device (i.e. col. 6 lines 50-62)

-        checking a empty memory block of said portable memory device, and writing

said first version of said execution code of said host computer in said empty

memory block of said portable memory device, and jumping the step of (d (i.e.

col. 5 lines 41-50)

-        checking a memory block stored an oldest version of said execution code of said

portable memory device, deleting said oldest version of said execution code, and

writing said drive code of said host computer into said memory block (i.e. co. 5

lines 61-67; col. 6 lines 1-5).

Per claim 16, it is the apparatus version of claim 9, respectively, and is rejected for the

same reasons set forth in connection with the rejection of claim 9 above.

Per claim 23, it is the apparatus version of claim 16, respectively, and is rejected for the

same reasons set forth in connection with the rejection of claim 16above.

10.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Insun Kang whose telephone number is 571-272-3724. The

examiner can normally be reached on M-F 8:30-5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, MENG AI AN can be reached on 571-272-3756. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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